Amendment to the Specification

Please amend the Specification as shown.

Amend Paragraph 18 at pages 5 and 6 as follows:

Particularly if the relationship of the devices to one another established according to the present invention is stored in appropriate means in devices or nodes, reconstruction can take place very quickly locally if a device replacing another requests the stored relationship of the old device from its neighbor, i.e. upstream neighbor or downstream neighbor. These means can be any kind of storage such as hard disks, diskettes or even memory devices such as flashes.

Amend Paragraph 21 at pages 6 and 7 as follows:

Fig. 1 shows a first implementation of the present invention of the kind that can be provided in an automation system. A large number of nodes Sn, S2, S3 and S4 are interconnected, each of the nodes having a number of connections. For example, the node S3 has the connections P1S3, P2S3, P3S3 and P4S3. The node S3 is connected by means of its connection P1S3 to the connection P3S2 of the node S2. The latter is in turn connected by means of the connection P1S2 to the connection P1Sn of the node Sn. The other connections which are not occupied by nodes can be occupied by other devices such as controls, databases, operator units, drives, sensors or actuators. For example, the node S3 is connected via the connection ~~P2S2~~ P2S3 to an operator unit B&B1 and via the connection ~~P2S3~~ P4S3 to a database ~~1~~. In addition, the node Sn is connected via the connection PaSn to a drive 1 as device Td and via connection P3Sn to a drive 2 as device T2. In addition to the above-mentioned assignment, the node S2 is additionally connected via P2S2 to a stored program control SPS1 as device T3 and to an operator unit OP1 as device T4.

Amend Paragraph 22 at pages 7, 8 and 9 as follows:

The principle of the present invention will now be described in greater detail using as an example the drive 1 which is designated as device Td in the network. It is first necessary to identify the

node to which the device Td is connected. This can be done, for example, by means of a discovery protocol which at the same time also allows the connection PaSn of the associated node to be determined. As soon as the node Sn has been identified as the node associated with the device Td, it must be ascertained in a next step how many connections the node possesses in total. In this example the node Sn has three connections, namely P1Sn, PaSn and P3Sn. In addition, the generally predefined hierarchy of the connections of node Sn must be ascertained. In the present case the following hierarchy is assumed: P1Sn<PaSn<P3Sn. In another step it must be ascertained which of the connections P1Sn, PaSn and P3Sn of the node Sn are still occupied. This takes place, for example, by means of an interrogation as to which MAC (Media Access Control) addresses are available at which of the connections. For this purpose an interrogation can take place by means of a protocol such as an Internet Protocol (IP) as to which IP address is assigned to which MAC address. In the present example it will therefore be ascertained that a drive 1 is connected to connection PaSn as device Td and a drive 2 is connected to connection P3Sn directly as device T2. The steps just described of the method according to the invention in respect of the node Sn must be performed correspondingly in respect of the other nodes of the network. For example, the node S2 has the four connections P1S2, P2S2, P3S2 and P4S2 to which other devices of the network are connected. The stored program control SPS1 is connected via connection P2S2 as device T3, and the operator unit is connected via connection P4S2 as device T4. Furthermore it will be assumed that the connections of the node S2 have the hierarchy P1S2<P2S2<P3S2<P4S2. As the nodes S2 and Sn are directly interconnected, the devices T3 and T4 are also indirectly connected to the node Sn via the node S2. Accordingly, the IP addresses of devices T3 and T4 can then in turn be ascertained using IP protocols. In a last step, the relationship between the devices must now be defined. From the relationship P1Sn<PaSn<P3Sn of the connections of the node Sn it can be directly deduced that the device T2 is the downstream neighbor of device Td, as T2 is connected to P3Sn and Td is connected to PaSn. In the other direction, it can be ascertained via the same relationship that the node ~~S1~~ Sn is the upstream neighbor of device Td, as S2 is connected to P1Sn and Td is connected to PaSn. As the relationship P1S2<P2S2<P3S2<P4S2 in turn exists for the node S2 and the node Sn is connected to P1S2 and the device T3 is connected to P2S2, the upstream neighbor of device Td can therefore be determined indirectly. As this can be continued accordingly for all the devices of the network, an order of all the devices in the network can therefore be demonstrated via the predefined and therefore known hierarchy of the connections

of the individual nodes and the knowledge of which connections are occupied. The resulting order for the implementation shown in Fig.1 is schematically illustrated in Fig. 2. It should be noted that the hierarchy of the connections of a node only specifies a direction but gives no direct indication as to which is an upstream neighbor or a downstream neighbor. This definition is freely selectable as long as only the relationship of the connections of all the nodes present in the network have the same orientation.

Amend Paragraph 23 at pages 9 as follows:

The present invention can then be advantageously used, for example, when it comes to replacing a defective drive in an automation network. Assuming that drive 1 is defective and is replaced by a maintenance engineer, the new drive must first identify which node it is assigned to and which devices are its neighbors, e.g. upstream neighbor or downstream neighbor. If the device T3 has a flash memory in which the relationship or order of Td with respect to T3 determined according to the present invention is stored, the device T3 can provide the replacement device Td with the corresponding stored data as soon as the device Td has identified the device ~~TS~~ T3 as a neighbor. The replacement device Td can then take over the functions of the old drive directly and without major loss of time. As this takes place locally in a limited vicinity within the network, no time-consuming replanning or reconstruction of the network by a central unit is required.